UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,609	04/25/2005	Jonathan A Clark	36-1895	5712

23117 7590 06/21/2007	EXAMINER	
NIXON & VANDERHYE, PC	PARK, JEONG S	
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ARLINGTON, VA 22203	ART UNIT	PAPER NUMBER
	2154	

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06/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/532,609	CLARK, JONATHAN A
	Examiner	Art Unit	
	Jeong S. Park	2154	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 April 2005_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _25 April 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _4/25/2005, 8/3/2005_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

The specification does not include any necessary headings such as

"Background", "Brief Summary", "Description of Drawings" and so on.

Appropriate correction is required.

Claim Objections

2.   Claims 1-10 are objected to because of the following informalities:

In claim 1, line 1, the word "internet" should be corrected as –Internet-- and

similar correction should be made for claims 1-10;

In claim 1, line 3, the phrase "the same data" should be corrected as –same

data-- for clear understanding of the claim and similar correction should be made for

claims 4 and 7;

In claim 1, line 4, the phrase "the same end user" should be corrected as –same

end user-- for clear understanding of the claim and similar correction should be made

for claims 4 and 7;

In claim 1, line 4, the phrase "the requested data" should be corrected as --

requested data-- for clear understanding of the claim and similar correction should be

made for claim 7, line 7.

In claim 1, line 5, the word "the data" should be corrected as –the requested

data-- for clear understanding of the claim and similar correction should be made for

claims 1-10;

In claim 1, line 5, the phrase "the different addresses" should be corrected as – different addresses-- for clear understanding of the claim and similar correction should be made for claim 7, line 8;

In claim 2, line 1, the phrase "an internet application" should be corrected as –the Internet application-- for clear understanding of the claim and similar correction should be made for claim 3, line 1;

In claim 2, line 3, the phrase "the same correlation code" should be corrected as –same correlation code-- for clear understanding of the claim;

In claim 3, line 2, the phrase "the data rates" should be corrected as –data rates-- for clear understanding of the claim and similar correction should be made for claim 5, line 3;

In claim 4, line 7, the word "the user" should be corrected as –the user terminal-- for clear understanding of the claim;

In claim 5, line 1, the phrase "a user terminal" should be corrected as –the user terminal-- for clear understanding of the claim and similar correction should be made for claim 6, line 1;

In claim 6, line 2, the phrase "the incoming data" should be corrected as –the incoming requested data-- for clear understanding of the claim and similar correction should be made for claim 10, line 2;

In claim 7, line 8, the phrase "the user terminal" should be corrected as –a user terminal-- for clear understanding of the claim; and

In claim 8, line 1, the word "a method" should be corrected as –the method-- for

clear understanding of the claim and similar correction should be made for claims 9-10,

line 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Zisapel et al. (hereinafter Zisapel)(U.S. Patent No. 6,665,702 B1) in view of

Apostolopoulos et al. (hereinafter Apostolopoulos)(U.S. Patent No. 6,868,083 B2).

Regarding claim 1, Zisapel teaches as follows:

An internet application for providing data on receipt of requests from user

terminals (client 105 in figure 3A) over a distributed information network (Internet 110 in

figure 3A)(provide efficient connectivity between client and Internet servers by sending

polling request and receiving reply, see, e.g., col. 15, lines 66-67 and col. 16, lines 15-

18), having means arranged to identify whether a plurality of addresses (content router,

145 in figure 3A, assigns respective network addresses to client 105 in figure 3A, see,

e.g., col. 16, lines 11-12) making requests for the same data (three polling requests are

sent to the same destination, see, e.g., col. 16, lines 12-13) are associated with the

same end user(client 105 has an IP address, see, e.g., col. 16, lines 1-3 and figure 3A).

Zisapel does not teach that splitting the requested data and streaming different

parts of the data to the different addresses requesting it.

Apostolopoulos teaches as follows:

A path diversity transmission system for improving the quality of communication over a lossy packet network and the path diversity transmission system sends different subsets of packets (different pats of the data) over different paths (different addresses requesting it)(see, e.g., col. 3, lines 32-36).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Zisapel to include splitting the requested data and streaming different parts of the data to the different addresses requesting it as taught by Apostolopoulos in order for reliable communication over the Internet and better performance of available multiple paths with load balancing among that paths.

Regarding claim 2, Zisapel teaches as follows:

Means for identifying correlation codes associated with data requests, means for associating each such data request with any previous requests for the same data having the same correlation code (content router first checks to determine if the destination is known from the destination table, see, e.g., col. 18, lines 49-51 and figure 6 and 7).

Zisapel does not teach that means for splitting the requested data between the addresses associated with the data requests.

Apostolopoulos teaches as follows:

Means for splitting the requested data (packetizer, 200 in figure 2, specify how a bit stream is to be split into packets, see, e.g., col. 5, lines 30-32 and figure 2 and

multiple stream generator, 210 in figure 2, generates at least a first stream and a second stream, see, e.g., col. 5, lines 37-40) between the addresses associated with the data requests (path diversity mechanism, 134 in figure 1, sends at least a first subset packets through a first path 160 and a second subset 170 of packets through a second path, see, e.g., col. 4, lines 26-29).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Zisapel to include splitting the requested data and streaming different parts of the data to the different addresses requesting it as taught by Apostolopoulos in order for reliable communication over the Internet and better performance of available multiple paths with load balancing among that paths.

Regarding claims 3 and 9, Zisapel teaches as follows:

Means for identifying the data rates available to each of the requesting addresses (the content router presents to the client the most efficient pathway for choosing connection to the destination. Each path posses a path quality factor, which includes traffic load, packet loss and link pricing, see, e.g., col. 17, lines 41-56).

Zisapel does not teach that means for apportioning the data between the addresses accordingly.

Apostolopoulos teaches as follows:

Based on the network information, route information, and quality of service requirements, the diverse path transmitter, 240 in figure 2, selectively transmits each subset of packets on a predetermined path (see, e.g., col. 6, lines 11-16 and figure 2).

It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Zisapel to include apportioning the subset of packets to different paths based on the capability of each path as taught by Apostolopoulos in order for reliable communication over the Internet and better performance of available multiple paths with load balancing among that paths.

Regarding claim 4, Zisapel teaches as follows:

A user terminal for accessing data from an internet application (client 105 and content router 145 in figure 3A) over a distributed information network (Internet 110 in figure 3A)(see, e.g., col. 15, line 61 to col. 16. line 3), provided with means for generating a plurality of access requests for the same data to be delivered by the internet application over a plurality of routes (routers 1 to 3, 130, 135, 140 in figure 3A)(content router sends polling requests through each of routers, see, e.g., col. 16, lines 6-10), each request conveying an indication of their common origin to the targeted internet application, and means for receiving the requested data (client IP address, see, e.g., col. 16, line 1-2 and content router assigns respective network addresses to client sends to the destination, see, e.g., col. 16, lines 11-14).

Zisapel does not teach that assembling the data sent over the plurality of routes into a single stream for access by the user.

Apostolopoulos teaches as follows:

The receiving device (140 in figure 1) includes a packet sorter (310 in figure 3) for receiving the subsets of packets and sorting the packets to recover the original order of the packets and a recovery unit (320 in figure 3) for receiving the packets in original order and for reconstructing the communicated information (see, e.g., col. 7, lines 1-6).

It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Zisapel to include a receiving device for reconstructing the original

information from multiple different paths as taught by Apostolopoulos in order for

reliable communication over the Internet and better performance of available multiple

paths with load balancing among that paths.

Regarding claim 5, Zisapel teaches as follows:

Means for generating a first access request (polling requests) having a

correlation code indicative of its origin (client IP address and each router address)(see,

e.g., col. 16, lines 4-14); and

Means for determining the best path among multiple paths (see, e.g., col. 17,

lines 63-65).

Zisapel does not teach that means for determining whether the data rate of the

data received in response to the first request meets a predetermined level and means to

generate one or more further requests over different routes using the same correlation

code.

Apostolopoulos teaches as follows:

Based on the network information, route information, and quality of service

requirements (predetermined level), the diverse path transmitter, 240 in figure 2,

selectively transmits each subset of packets on a predetermined path (see, e.g., col. 6,

lines 11-16 and figure 2).

It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Zisapel to utilize multiple paths to transmit the same data based on

the quality of service requirements of the data and the capacities of the multiple paths

by determining the proper paths before the first transmission as taught by

Apostolopoulos in order to determine proper paths among all available paths based on

the service requirements of the data and the route information for each paths before first

transmission and utilize the proper paths based on the determination.

Regarding claims 6 and 10, Zisapel teaches all the claim limitations except for

buffering the incoming data to allow its reassembly in a manner prescribed by the data

content.

Apostolopoulos teaches as follows:

The receiving device (140 in figure 1) includes a packet sorter (310 in figure 3)

for receiving the subsets of packets and sorting the packets to recover the original order

of the packets and a recovery unit (320 in figure 3) for receiving the packets in original

order and for reconstructing the communicated information (see, e.g., col. 7, lines 1-6).

It is well known in the art and inherent to have buffering means to accomplish the

packet sorting in order to recover the original information after being received subsets of

the original information through different paths.

It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Zisapel to include buffering means as taught by Apostolopoulos in

order to reassemble the original information properly.

Regarding claim 7, Zisapel and Apostolopoulos teach all the claim limitations as

explained above regarding claims 1 and 4.

Regarding claim 8, Zisapel and Apostolopoulos teach all the claim limitations as
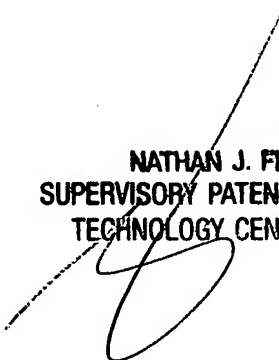
explained above regarding claims 1 and 5.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeong S. Park whose telephone number is 571-270-1597. The examiner can normally be reached on Monday through Thursday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
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